assumptions: for every point on the image plane, there exists at least one input image that has reasonable exposure at that point: $\forall(x_0, y_0) \in (x, y), \ \exists\, k_i q(x_0, y_0)$ such that:

1. $k_i q(x_0, y_0) >> n_{q_i}$, and
2. $c_i\left(q(x_0, y_0)\right) >> c_i\left(\frac{1}{k_i} f^{-1}(n_{f_i})\right)$